

Notice of Allowability

Application No.

09/343,872

Examiner

Kim T. Huynh

Applicant(s)

DAO ET AL.

Art Unit

2112

-- **Th MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/18/04.
2. ☒ The allowed claim(s) is/are 1-8 and 10-26.
3. ☒ The drawings filed on 30 June 1999 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

TIM VO
PRIMARY EXAMINER

DETAILED ACTION

Allowable Subject Matter

1. Applicant's amendments filed on 11/18/04 have been fully considered and are persuasive.

2. The following is an examiner's statement of reasons for allowance:

As per claims 1-8, 10, Applicant's claimed invention is deemed allowable over the prior art of record as the prior art fails to teach or suggest wherein each group of bus lines includes two unidirectional bit lines for each data bit, and wherein the bus bridges include a multiplexer for each outgoing bit line that selects from three other incoming bit lines in combination with other limitations as recited in independent claims and further in view of the specification and applicant's arguments.

As per claims 11-14, Applicant's claimed invention is deemed allowable over the prior art of record as the prior art fails to teach or suggest memory manager setting a router in a conflict-free access pattern in response to said transfer requests, the memory manager providing control signals to bus bridges that couple local busses between a memory module and a processing device to a cross-bus between the local busses and the local busses each include two unidirectional bit lines for each data bit and the cross-bus includes two unidirectional bit lines for each data bit in combination with other limitations as recited in independent claims and further in view of the specification and applicant's arguments.

As per claim 15, Applicant's claimed invention is deemed allowable over the prior art of record as the prior art fails to teach or suggest a memory controller means for

setting said bridge means to provide processing devices with access to memory modules, wherein the memory controller means is configured to provide highest priority for access from processing devices to the associated memory modules and the local bus line groups each include oppositely configured unidirectional bit lines for each data bit and the cross-bus lines includes oppositely configured unidirectional bit lines in combination with other limitations as recited in independent claims and further in view of the specification and applicant's arguments.

As per claims 16-24, Applicant's claimed invention is deemed allowable over the prior art of record as the prior art fails to teach or suggest local intersect busses are coupled to each of the plurality of local memory busses by four multiplexers at each intersection in combination with other limitations as recited in independent claims and further in view of the specification and applicant's arguments.

As per claims 25-26, Applicant's claimed invention is deemed allowable over the prior art of record as the prior art fails to teach or suggest the cross-bus lines are configurable to latch signals to the separate sets of bus lines such that throughput and cross-path latency between processors and memories that are not paired is customizable in combination with other limitations as recited in independent claims and further in view of the specification and applicant's arguments.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim Huynh whose telephone number is (571)272-3635 or via e-mail addressed to [kim.huynh3@uspto.gov]. The examiner can normally be reached on M-F 9:00AM- 6:00PM. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9306 for regular communications and After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-2100.



Kim Huynh

Jan. 21, 2005

TIM VO
PRIMARY EXAMINER